REMARKS

1. INTRODUCTION

Applicant has amended claims 3-6, 8, 16, 18, 26 and 28-30, cancelled claims 1-2, 13-15, 17 and 27 and added new claim 37. Accordingly, claims 1 - 37 are pending and under consideration in this application. Reconsideration and reexamination is hereby respectfully requested.

2. STATEMENT OF INTERVIEW SUMMARY

Applicant and his representative appreciate the courtesy of the telephone interview on October 18, 2006. Claims 1-6 were discussed along with the Cirne et al. reference. No agreement was reached.

3. CLAIM REJECTION UNDER 35 U.S.C. § 101

Claims 16-25 stand rejected on the grounds that the claimed invention is directed to non-statutory subject matter. Applicant has amended claim 16 to recite in-part a "method of detecting memory leaks for a monitored application program stored in a memory of and executing on a computer". In view of this amendment, Applicant respectfully requests reconsideration and withdrawal of the rejection.

4. CLAIM REJECTION UNDER 35 U.S.C. § 102

Claims 1-36 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. 2004/0078540 (Cirne et al.). Applicant respectfully overcomes this rejection.

Independent claim 3 recites, among other things, the step of "identifying increases in the peaks of the sampled allocated memory levels ***that are countable towards the alarm limit*** . . .". As claim 3 suggests, not every increase in the peak allocated memory level will be "counted" in the claimed methodology to detect a memory leak, but rather those that are "indicative of a memory leak". As described in the specification of the present application, many increases in the peak allocated memory levels occur due to program startup or due to normal memory allocation activity, both of which are normal and expected and are not indicative of a memory leak. Claim 3 further recites the step of "detecting a memory leak when ***countable*** increases in

peak allocated memory levels reach the alarm limit." Accordingly, there must be a countable number of increases that satisfies the alarm limit. Cirne et al. does not teach or suggest these recitations.

As an initial matter, Cirne et al., as set forth in Applicant's prior response and incorporated herein, at most disclose a system predicated on observations of the growth patterns of collections of objects. Accordingly, Cirne et al. do not disclose any process satisfying claim 3 which expressly relates to allocated memory levels, not the size of objects or collections of objects.

Nonetheless, even assuming for purposes of argument only that the tracking of growth patterns disclosed in Cirne et al. correlate with growth patterns in the amount of allocated memory (as contended by the Office), present claim 3, as amended, now recites specific limitations not taught or suggested by Cirne et al.

Cirne et al. cannot meet the recitation of "*countable* increases" in peak allocated memory since Cirne et al. make no distinctions as to whether the increases ("growth") in the size of collections are due to normal allocation activity or whether it is due to activity indicative of a memory leak. Cirne et al. is simply looking for the increase in size.

For at least these reasons, claim 3, as amended, is respectfully contended to define over Cirne et al. Reconsideration and withdrawal of the rejection is hereby respectfully requested.

Claim 4 recites "a startup time interval" that begins with the initial execution of the application program and has a determined duration. Claim 4 further recites "ignoring increases in peak allocated memory levels that occur during the startup time interval . . . such that any increases . . . *are not countable towards the alarm limit.*" (emphasis added).

Cirne et al. cannot meet claim 4. In this regard, the Office has cited to paragraphs [0016] – [0017] of Cirne et al. for the proposition that purports to satisfy this feature, namely, "discontinuing track of newly allocated collections if no longer appear to be leaking." While Applicant understands the Office to be construing "discontinuing track of newly allocated collection" as meeting the "ignoring" step, Applicant respectfully points out that such "ignoring"

would be performed under the teachings of Cirne et al. *after* Applicant's recited startup time interval. Hence, Cirne et al. cannot meet this temporal aspect of claim 4.

Nor are Applicant's startup time interval and Cirne et al.'s time-out period interchangeable for obviousness purposes. Applicant's "startup time interval", as positively recited as commencing with the initial execution of the application program, has a duration recited to cover normal memory allocation activity ***which is not indicative of a memory leak.*** It can hence be ignored and any increases during this time are not "countable towards the alarm limit". It is respectfully contended that this is one more reason that Cirne et al. does not teach or suggest the present invention because Cirne et al. stop tracking ("ignore") memory allocation activity for memory leaks precisely during the time when it is most likely to detect a memory leak (*i.e.*, after the startup)—all in the interest of saving overhead.

In Cirne et al., if a monitored program does not immediately show a memory leak at the beginning of execution before its "time-out period" it will fall off the monitored list. This is a significant shortcoming of Cirne et al. relative to the present invention.

Accordingly, Cirne et al. does not teach or suggest the limitations of claim 4, much less in combination with the features of claim 1. Accordingly, claim 4 recites novel and nonobvious subject matter. The rejection is hereby respectfully requested to be reconsidered and withdrawn.

Claim 5 positively recite a peak-to-peak timer feature where a second, subsequent increase in the peak allocated memory level is ignored "as not countable toward the alarm limit" when the second increase (*i.e.,* a subsequent peak) occurs too closely in time to a first increase (*i.e.,* a previous peak). The recited temporal characteristic is not indicative of a memory leak and is therefore is ignored in accordance with the invention.

Cirne et al. cannot meet claim 5. Cirne et al. do not disclose any methodology or criteria for analysis other than a generalized statement that it is looking for "growth patterns that are constantly growing in size". This disclosure does not teach or suggest drawing distinctions as now positively claimed between increases in peak allocated memory levels that occur closely in time (*not* indicative of a memory leak) and increases in peak allocated memory levels that occur over much longer periods of time (which are indicative of a memory leak).

Accordingly, Cirne et al. does not teach or suggest the limitations of claim 5, much less in combination with the features of claim 1. Accordingly, claim 5 recites novel and nonobvious subject matter. The rejection is hereby respectfully requested to be reconsidered and withdrawn.

Claim 6 recites the step of determining a leakage rate as a function of time when the alarm limit has been reached. Claims 7 recites the step of producing a response when the leakage rate exceeds a preselected level. For the following reasons, Cirne et al. cannot meet the limitations of these claims.

While Cirne et al. do disclose a methodology for looking at growth patterns (see Table 2 of Cirne et al. and accompany text), the disclosure at most teaches making such an assessment strictly based on the size of the collection irrespective of time. That is, for example, from Table 2 of Cirne et al., if a collection had not been previously tagged as potentially leaking (e.g., sensitivity counter is less than 3), and the sensitivity (a user specified parameter) is 10, then the Table 2 specifies a growth of 5% (e.g., Growth Factor of 1.05 from Table 2) as a "threshold". However, this parameter only specifies how much the collection needs to have grown in size since the last check, ***expressed as a percentage of the original collection size,*** to be flagged as potentially leaking. Even repeatedly performing this does not develop a time-based leakage rate as a function of time, as now recited (*e.g.*, X kilobytes per minute, as specified in paragraph [0030] of Applicant's published application under "8. MINIMUM_RATE_FOR_ALARM").

As set forth in Applicant's prior response, Applicant has carefully reviewed the cited paragraphs (e.g., [0016] through [0019]) and takes note that Cirne et al. at most disclose only a comparison between a collection size and threshold (size) (*i.e.*, is the collection size ***greater than*** the threshold?). The result of the comparison is a YES or a NO. Cirne et al. cannot therefore satisfy this limitation.

The remaining claims not discussed above either (i) depend from one of claims 3-7 and thus contain all the limitations thereof, or (ii) include comparable limitations as described above. Accordingly, for at least the same reasons given above, Applicant respectfully contends that the rejections of all the claims have been overcome.

In view of the foregoing, Applicant respectfully requests reconsideration and withdrawal of the same.

5. CONCLUSION

For the foregoing reasons, all presently pending claims are now believed to be in a condition for allowance. Early notice of the same is hereby respectfully requested.

Respectfully submitted,

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